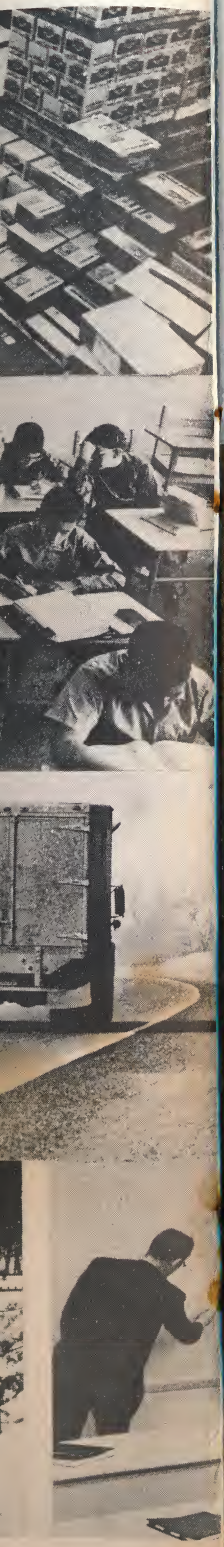

IBM 1440
New low cost
Data Processing
System
IBM 1440



IBM announces new low cost 1440—problem solver for all types of businesses

It's an accounting system, and a business information system. And its cost makes it practical and profitable for smaller volume businesses. In fact, IBM's new 1440 Data Processing System is specifically designed to meet the needs, and solve the problems, of smaller volume businesses.

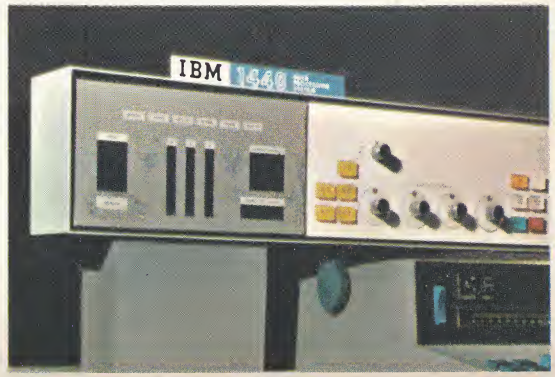
Whether you're producing parts, forwarding freight, lending money or caring for patients, the 1440 can help make your job easier.

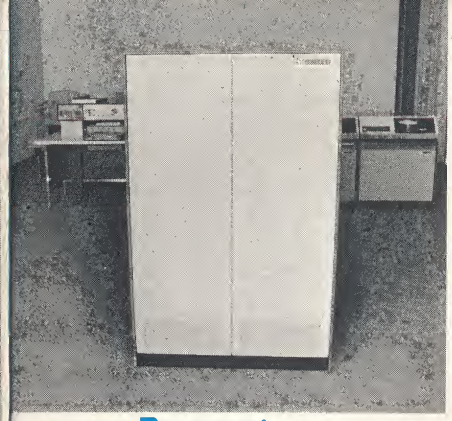
The 1440 handles payrolls, accounts receivable, inventory, all your day-to-day business operations. It keeps records always up-to-date, always immediately available, always useful.

But even more important, the 1440 gives you the up-to-the-minute control and supervision you need for your business. With the 1440 you get the kind of business information you need, on your desk when you need it, in a form you can use. These reports, schedules and analyses eliminate much of the guess work in day-to-day business decisions—those decisions that spell success or failure, profit or loss.

And the 1440 does all this at a price smaller volume business can easily afford.

The 1440 provides the tools for modern business management. When you use the 1440 as a management tool, you make it a profit tool as well.





Processing

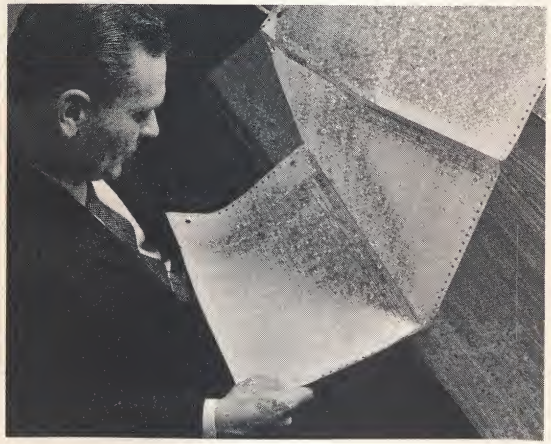
What's the 1440 *like?*

Basically like other, larger IBM Systems.

But the 1440 features several unique technical improvements—such as its new method of storing and handling business data. This unique concept makes the 1440 an even better management tool for smaller businesses.

Simply put, the 1440 receives business data (input), processes it, stores it for easy access, and produces output—such as invoices, paychecks, business reports and analyses. Here's how the 1440 does all this:

Input: Telling the system what to do ("programming the computer") is the first step. Instructions on what to do (prepare analyses, create reports, compute and print payrolls) are normally read into the 1440 from punched cards.



Output

These instructions, called a "stored program," are stored in the system. Now the system is ready to go to work, as soon as business data is fed into it.

When you're ready for another job, you feed another set of instructions into the system.

Processing: Following the stored program's instructions, the 1440 goes to work on the incoming business data, performing all the necessary calculations, comparisons and other operations required to complete the job.

Storage: In the 1440, business data can be stored on IBM's unique removable disk packs, on high-capacity disk storage units, or on magnetic tape. Disk packs and tape reels are easily attached and removed for different jobs. All of these storage devices also provide input/output capabilities for the system.

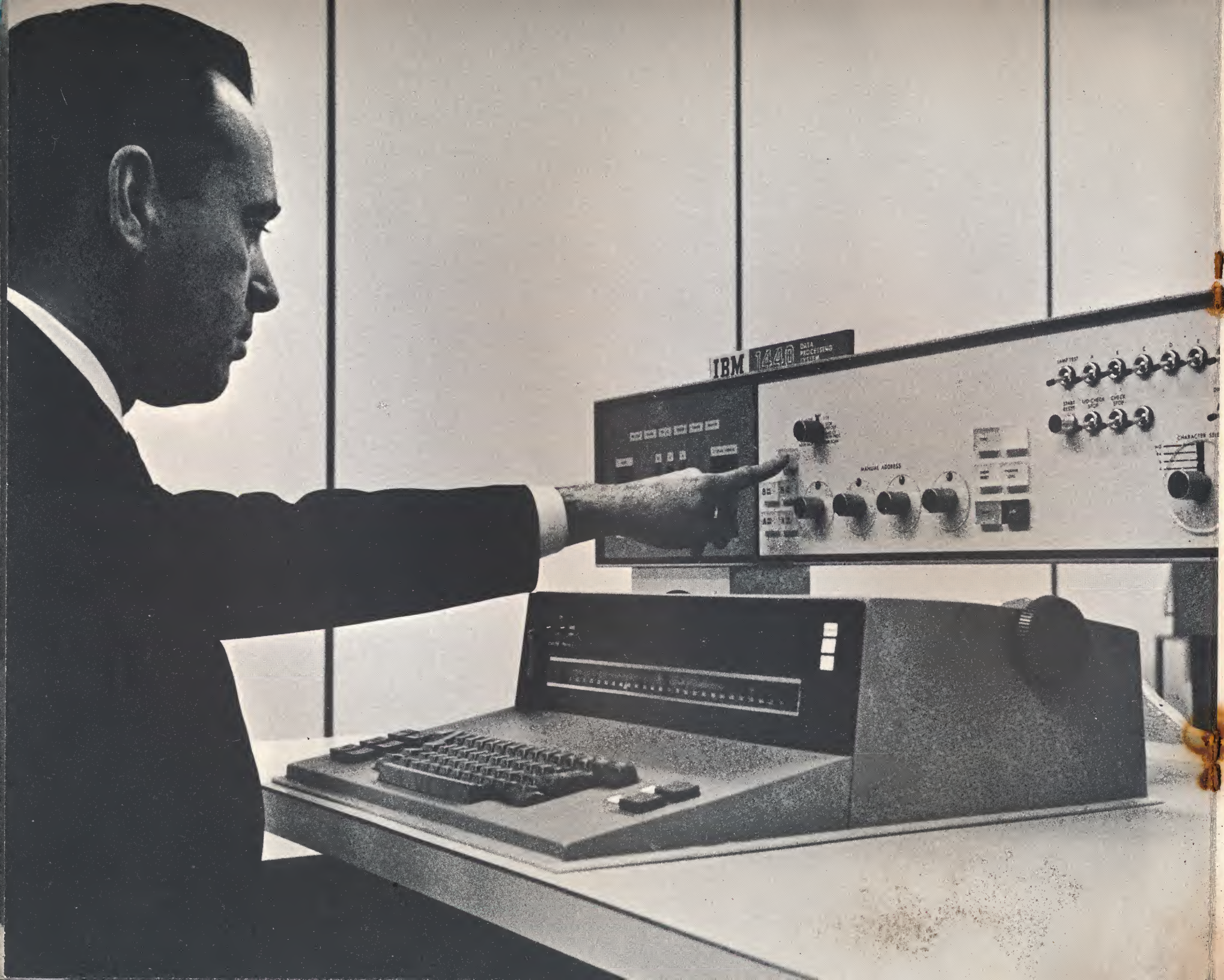
Payroll records, inventory status, sales and income reports, production line schedules and operations—any kind of data a business needs and uses—can be stored on-line, always immediately available for inquiry, updating and preparing reports.

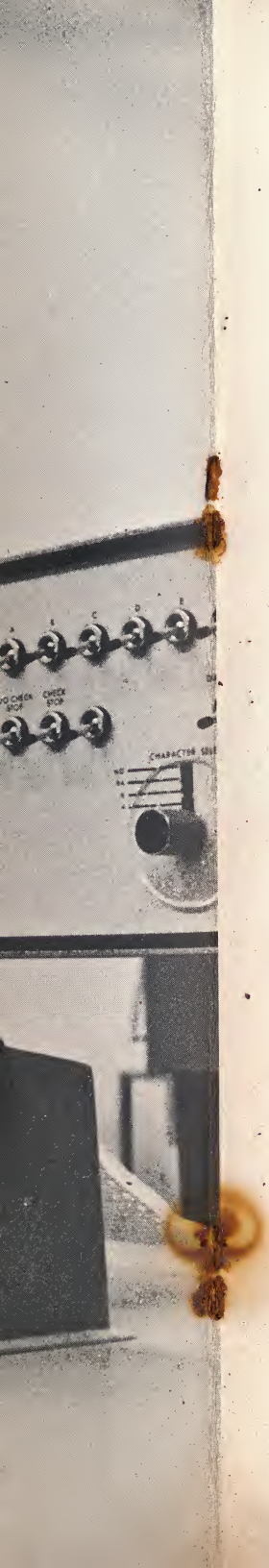
Output: The 1440's output can take many forms. The most common is printed documents, such as invoices, payroll checks, inventory status, production reports, sales analyses and manufacturing schedules.

A valuable management tool, *exception reporting,* is another form of output. Any unusual business activity—material shortages, over-extensions of credit, scheduling conflicts—can be reported by the system immediately. With such information immediately available, management can take prompt, effective action.

Output can also be recorded on punched cards, magnetic tapes or magnetic disks. The cards, tapes and disk packs can be used for future processing on the 1440, or other IBM data processing systems.

Storage


IBM 1440
MANUAL ADDRESS



The 1440 Data Processing System involves much more than machines. People must install these machines, tell them what to do, and monitor them for best results.

To help your people get the most from a 1440 system in the shortest possible time, IBM provides a wide range of important services—services that not only teach your employees how to operate the system, but help them put the system into operation, too.

Application Programs

To cut down the time and cost of planning your job on the 1440, IBM offers a number of Application Programs for different industries.

These provide completely planned, documented and tested procedures to handle many jobs that are common throughout the industry. If you wish, you can modify these programs to suit your particular procedures.

For jobs where specifications vary greatly from customer to customer, IBM provides a demonstration program illustrating the procedures required and, wherever possible, the instructions which may be used by the customer to develop his specific program.

IBM Application Programs are provided without charge.

Programming Systems

To help speed up the detailed work of programming development, IBM also provides a series of programming systems for the 1440. These programs help get the 1440 into operation sooner, with less trouble, and at less cost. These programs include:

Report Program Generator, a program that lets you specify the form of the reports you want from the 1440. With these requirements, the RPG automatically generates the machine instructions to produce the desired reports.

Autocoder, a program that lets you write programming instructions in understandable names and symbols, rather than actual machine language. This greatly simplifies the preparation of programs for the 1440.

Input/Output Control System, a program that eliminates much of the detailed work required for input and output operations.

Disk Storage Organization, a program that helps establish and maintain business records stored in the disk packs.

Disk Storage Utility, a program that clears any disk storage and transcribes data to and from the magnetic disks.

Sort, a program that rearranges the records in disk packs into any desired sequence.

Magnetic Tape Utilities, programs that facilitate the performance of magnetic tape functions, like transferring data between punched cards and magnetic tape, or transferring data from magnetic tape to the printer.

Training your people

IBM provides a series of 1440 education courses, each one planned for a specific member of your 1440 team. Courses are taught at the local IBM Branch Office or at an IBM Education Center in the area. They include a one-day seminar for executives, a three-day course on the report program generator, and a two-week school in basic programming methods.

Systems Engineering

IBM systems engineers work directly with your employees in planning your 1440 installation. They help you determine the jobs you want the 1440 to do and plan the best system configuration to give you maximum results.

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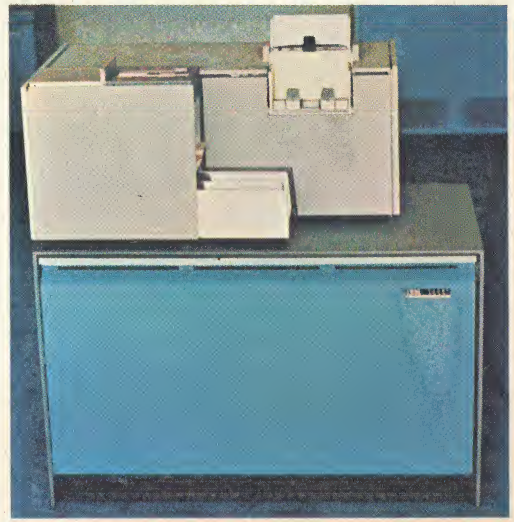


Card Read–Punch

Disk Storage Unit

Components of a basic 1440 system include the card read-punch, processing unit, operator console and printer.

As your business grows, the new 1440 can grow with it. You can add components as you need them. These include: disk storage drives with removable disk packs, new low-cost tape units, high-capacity disk storage units, as well as additional card input/output devices. If your requirements eventually grow beyond the power of the 1440, you can step up to a larger computer in IBM's 1400 series.

Here's a brief description of the major features of 1440 components:

Card Read-Punch: Here's where all data in punched card form feeds into the 1440 system. The card read-punch uses solar cells for high-speed, accurate reading—up to 400 cards per minute.

If you want additional card reading capability, a card reader that reads up to 400 cards per minute is available to supplement one card read-punch.

The card read-punch also produces output from the 1440 in punched cards, if your program so requires. It punches data into cards at a rate of up to 160 columns per second.

For added card punching ability, a card punch that punches 250 cards per minute can be used with one card read-punch or one card reader.

Processing Unit: All the logic and arithmetic units of the 1440 system are housed in the processing unit. Program instructions are stored here, too. The processing unit controls the execution of these stored programs, performs all the calculations, and directs the operation of all the other components of the system.

The processing unit does all this at high speeds. In one second, for example, the processing unit can add 4,000 five-digit numbers.

Two thousand alphabetic and numeric characters can be stored in the processing unit. This storage capacity can be expanded—in easy steps—from 2,000 to 16,000 positions to accommodate increased data processing requirements.

Disk Storage: Fast random access storage is a major key to the 1440's value.

Disk packs, used on disk storage drives, are easy to remove and interchangeable: you can use as many as you need to store all your business records.

One disk pack holds nearly 3,000,000 characters of data that can be read and completely rewritten in approximately three minutes. Any 1440 system can have as many as five disk storage drives operating at one time...offering fast access to nearly 15 million characters of data.

For applications requiring larger quantities of continuous, on-line storage, a disk storage unit with a capacity of over 20 million characters of information per module can be added. You can add as many as five of these modules—giving your system more than 100 million characters of random access storage.

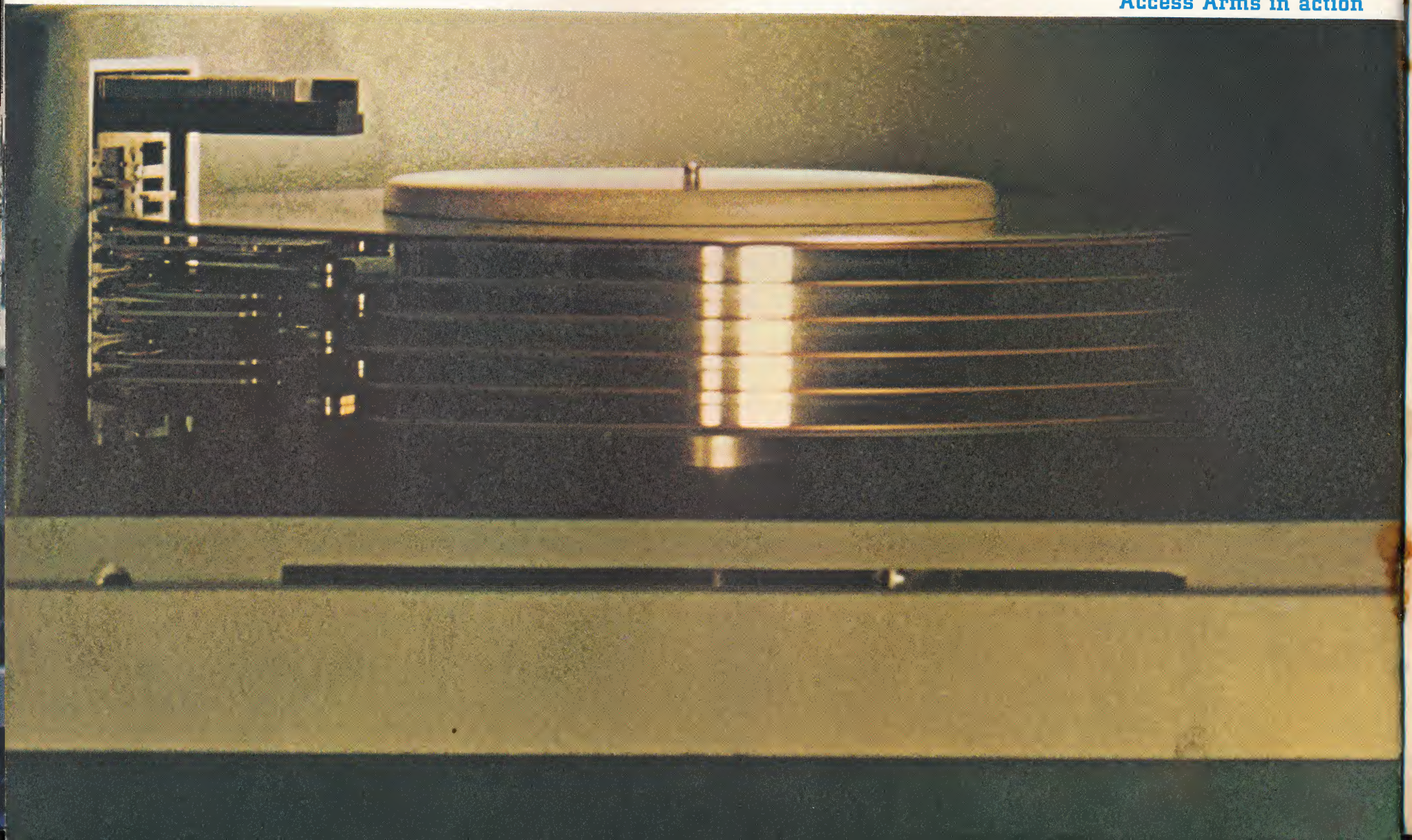
These high-capacity disk storage units can be combined with disk storage drives in the same system to provide maximum flexibility and storage of up to 110 million characters... on-line.

Removing the Disk Pack

Disk Storage Drive

Console

Access Arms in action



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Magnetic Tape Units

Information from disk storage is accessible in milliseconds, because the comb-like arms of the disk storage drive and disk storage unit move at great speed between the rotating magnetic disks. This high-speed-access ability lets you benefit fully from the performance speeds of your 1440 system.

Magnetic Tapes: Low-cost magnetic tape units are available with the 1440 system.

They read data into or accept data from the 1440 at a rate of 20,000 characters per second. A maximum of two tape units can be used with each system.

These units provide efficient on-line storage, as well as economical bulk shelf storage for audit trail data and similar historical records.

Equally important, they provide an efficient medium for transferring data between the 1440 and many other IBM systems.

Console: The console serves not only as the operator's control position for the entire system, but it may also include a special typewriter for direct written communication between the operator and the computer.

Printer

Using the typewriter, an operator can make direct inquiry to any business record stored in the system. Within seconds, the 1440 seeks out the record, wherever it is stored, and prints it out on the typewriter.

What's more, the 1440 can be programmed to automatically print out on the typewriter any unusual business activity that requires immediate management attention. For example, an inventory shortage, an over-extension of credit, any unusual fluctuation in a customer's ordering cycle, could be reported out of the 1440 system immediately.

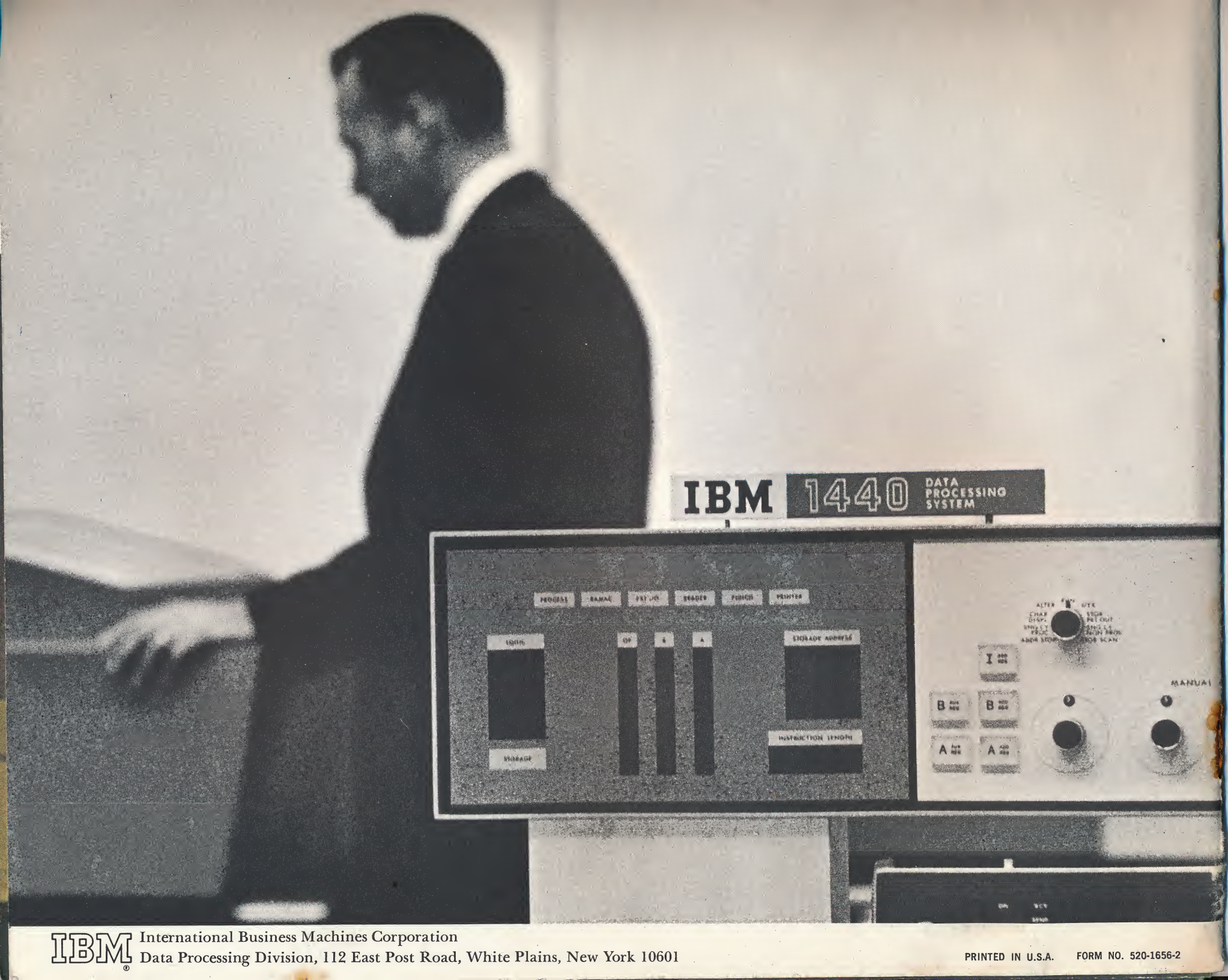
Printer: Outstanding feature of the 1440's printer is the interchangeable typebar. Various typebars are available with various sets of characters—numbers; numbers and letters; numbers, letters, and special characters, for example. You use the specific typebar required for your particular job. Printing speeds are different for the various typebars. And an operator can change typebars quickly and easily.

There are two models of the printer. Basic printing speed is 150 lines a minute on Model I, 240 lines a minute on Model II. Using the 13-character numerical typebar, you can print up to 430 lines a minute on Model I and 600 lines a minute on Model II.

Attachments

The 1440 can be made even more versatile by attaching a 1412 Magnetic Character Reader, which reads magnetically encoded banking documents, such as checks and deposit slips, into the 1440 system. Reading speeds range up to 950 documents a minute in the 1412.

In addition, the 1009 Data Transmission Unit, 1011 Paper Tape Reader or 1012 Paper Tape Punch can be attached if the job requires such equipment. Only one of these four input/output devices can be connected to the 1440 system at one time.



IBM International Business Machines Corporation
Data Processing Division, 112 East Post Road, White Plains, New York 10601

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